



## **DEPARTMENT OF HOMELAND SECURITY**

[Docket No. DHS-2013-0064]

### **Cooperative Research and Development Agreement (CRADA) Opportunity with the Department of Homeland Security for the Production and Associated Research of Purpose Bred Explosive Detection Canines**

**AGENCY:** Science and Technology Directorate, Transportation Security

Administration Office of Law Enforcement – Federal Air Marshal Service, Department of Homeland Security.

**ACTION:** Notice of intent.

**SUMMARY:** The Department of Homeland Security Science and Technology Directorate (DHS S&T), located in Washington, DC, and the Transportation Security Administration/Office of Law Enforcement - Federal Air Marshal Service (TSA/OLE-FAMS), specifically the Canine Training and Evaluation Section at Lackland Air Force Base in San Antonio, TX, are seeking industry collaborators to aid in continuing the use of selective breeding and data gathering to determine the most significant genetic and behavioral characteristics of explosive detection canines. The role of the industry collaborator(s) in this CRADA will be to continue breeding a colony of 8 Labrador Retrievers based on approved selective criteria, gather data based on existing Government established protocols, and to partner with other institutions to scientifically advance the selective breeding of purpose bred explosives detection canines based on

existing data supplemented by the continued gathering of data associated with the observation and measurement of canine health and performance.

DHS S&T and TSA/OLE-FAMS are seeking CRADA collaborators that own or have access to the technological components for, have the technological expertise in, and have proven track records of success in the fields of: high quality husbandry for the breeding of canines; understanding, collection and analysis of quantitative behavior trait measurement; application of quantitative techniques to improve genetic lines (Inbreeding Coefficients, Estimated Breeding Values, Linkage Analysis, Selection Indexes, etc); knowledge of advanced techniques (prenatal imprinting, olfactory imprinting, maternal oriented social learning, litter oriented social learning, early environmental conditioning, self search-self reward,) to ensure proper canine development and its potential epigenetic impact, and experience in preparing dogs for consignment evaluations by TSA/OLE-FAMS, and other DHS stakeholder community operational canine program evaluators. The proposed term of the CRADA can be up to thirty-six (36) months.

**DATES:** Submit comments on or before [INSERT DATE 30 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]

**ADDRESSES:** Mail comments and requests to participate to Mr. Don Roberts, (ATTN: Don Roberts, Mailing Address: S&T EXD Stop 0206, Department of Homeland Security, 245 Murray Lane, Washington, DC 20528-0202).

Submit electronic comments and other data to [don.roberts@hq.dhs.gov](mailto:don.roberts@hq.dhs.gov). The preferred method of communication for this Notice is through electronic correspondence.

**FOR FURTHER INFORMATION CONTACT:**

Information on DHS CRADAs: Marlene Owens, (202) 254-6671.

## **SUPPLEMENTARY INFORMATION:**

### Requirements:

#### Potential Collaborators

1. Should possess facilities to safely provide for the care and housing of 8 adult breeding females and up to 50 puppies each year. This should include housing areas, working/search areas, exercise areas, and separate whelping/weaning areas.
2. Should have experience and knowledge in how to properly rear a dog from birth to a year of age specifically to enhance its potential to be an effective explosives detection dog.
3. Should be veterinarians or have close working relationships with veterinarians familiar with canine reproduction and maintaining the health of developing working detection dogs. This should include veterinary expertise in screening for genetic faults that would preclude such dogs from being future working dogs (hip structure, elbow structure, no ocular anomalies or other genetic disease known to impact this breed).
4. Should be able to demonstrate their involvement and understanding in current behavioral canine research and be able to adapt their rearing schemes based on DHS S&T sponsored research by other academic institutions.
5. Should be able to demonstrate familiarity with and the ability to conduct ongoing behavioral testing of developing canines in the context of their potential to be working explosives detection dogs.
6. Should be able to demonstrate the skill and knowledge required to perform advanced genetic analysis on this population of dogs (Estimated Breeding Values,

Linkage Analysis, Inbreeding Coefficients, Selection Indexes, Quantitative Genetic analysis, Molecular Genetic analysis).

7. Should be able to demonstrate knowledge of and the ability to maintain computer databases to track all data associated with this population.

DHS S&T/TSA/OLE-FAMS Role (includes but not limited to):

1. Provide existing data in the form of paper record and/or database information on over 500 dogs bred since 2002;
2. Provide TSA subject matter experts to demonstrate, coordinate, and educate on how prior data was collected;
3. Provide previously written reports that suggest new and improved methodology of collecting future canine behavior data; and
4. Provide 8 breeding female Labrador Retrievers from proven stock of detection canines.

Period of Performance:

36 months from date of Agreement.

Selection Criteria

DHS S&T/TSA/OLE-FAMS reserves the right to select CRADA collaborators for all, some, or none of the proposals in response to this notice. DHS S&T/TSA/OLE-FAMS will provide no funding for reimbursement of proposal development costs. Proposals (or any other material) submitted in response to this notice will not be returned. Proposals submitted are expected to be unclassified.

DHS S&T/TSA/OLE-FAMS will select proposals at their sole discretion on the basis of:

1. How well the proposal communicates the collaborators' understanding of and ability to meet the CRADAs goals and proposed timeline.
2. How well the proposal addresses the following criteria:
  - a. Capability of the collaborator to provide equipment, materials, and personnel for the proposed effort.
  - b. Capability of the collaborator to meet the requirements for canine development, behavioral testing, data analysis, and submission of supporting data and documents fulfilling the stated requirements
  - c. Preliminary data or results which support the requirements outlined above.

Participation in this CRADA does not imply the future purchase of any materials, equipment, or services from the collaborating entities, and non-Federal CRADA participants will not be excluded from any future DHS S&T/TSA/OLE-FAMS procurements based solely on their participation in this CRADA.

Authority: CRADAs are authorized by the Federal Technology Transfer Act of 1986, as amended and codified by 15 U.S.C. 3710a.

DHS, as an executive agency under 5 U.S.C. 105, is a Federal agency for the purposes of 15 U.S.C. 3710a and may enter into a CRADA. DHS delegated the authority to conduct CRADAs to the Science and Technology Directorate and its laboratories.

Dated: September 12, 2013.

Stephen Hancock,

Director, Public Private Partnerships.

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